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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/829,153

04/22/2004

Kazutsugu Suita

04853.0113

5731

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7590

07/11/2008

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EXAMINER

PECHE, JORGE O

ART UNIT

PAPER NUMBER

3664

MAIL DATE

DELIVERY MODE

07/11/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/829,153	Applicant(s) SUITA ET AL.	
	Examiner Jorge O. Peche	Art Unit 3664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Receipt is acknowledged of applicant's argument/remarks filed on June 20, 2008, **claims 1-6** are pending and an action on the merits is as follows.

Applicant's arguments with respect to amended **claims 1-6** have been fully considered but are moot in view of the new ground(s) of rejection. Applicant has cancelled **claim 7**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terada et al. (**Patent No.: 5,561,742**) in view of Colimitra et al. (**Patent No.: US 4,683,772**) and further in view of Matsumoto et al. (**Patent No.: US 6,459,956 B2**)

Regarding **claims 1** and **3**, Terada discloses a multiple robot control and interference prevention method comprising the steps of:

- Defining a spatial region for a robot, which surround the movable robot (see abstract, col. 3, line 20 – col. 4, line 57; col. 8, lines 18-35; Figure 1).

- Calculating the movement trajectory of the work or tool, determining a predicted position of each of the defined three-dimensional spatial region, matching the predicted position of each of the defined three-dimensional spatial region with the robot spatial region, and carry out a control to start the braking of the arm at a predetermined distance ahead of the robot spatial region and stop the arm (see abstract, col. 7, line 66 – col. 8, line 35; Figure 1).

However, Terada fails to disclose a method for defining at least two three-dimensional spatial regions including parts of the arm of the robot including said work or tool, wherein each of the three-dimensional spatial regions has a substantially spherical shape with a predetermined radius, wherein the radius for each of the three-dimensional spatial regions is configured to maintain a space efficiency;

However, Colimitra teaches a hand gear train with three degree of freedom comprising the steps of:

- Defining a robot system with two movable arms, each arm having a six of degrees of freedom of movement and wherein each of the three-dimensional spatial regions has a spherical shape with a predetermined radius (see abstract, col. 1, lines 63-col. 2, lines 30, Figure 1).

Given the teaching of Colimitra, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Terada's invention to include a robot with three degree of freedom with a radius of rotation in the robot arm and base.

Doing so would enhance a multiple robot control capable to provide three degree of freedom work space.

However, Terada's invention, as modified by Colimitra, fails to disclose a physical safety barrier.

Matsumoto disclose a device a safety device for use with an industrial robot comprising the steps of constructing a physical safety barrier surrounding a movable robot surrounding a base mounted on a floor (see Figure 2).

Given the teaching of Matsumoto, it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify Terada's invention to include a physical safety barrier

Doing so would enhance a multiple robot control capable to provide physical safety.

Regarding **claims 2** and **4-6** refer to **claims 1** and **3**.

Response to Argument

In the Applicant's arguments filed on June 20, 2008, with respect to the rejections of claims 1-6 under 35 U.S.C. 103(a) as being unpatentable over **Sutherland et al.**

(Patent No.: US 7,155,316 B2) have been fully considered but are not persuasive.

No argument has been presented; Applicant is invited to view the new ground of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jorge O. Peche whose telephone number is (571)270-1339. The examiner can normally be reached on 8:30 am - 5:30 pm Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Khoi H. Tran can be reached on 571-272-6919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jorge O Peche/
Examiner, Art Unit 3664
July 3, 2008
/Khoi H Tran/
Supervisory Patent Examiner, Art Unit 3664

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